USAID GKG Trans-boundary Natural Resources Management Initiative:

Community Socioeconomic Profiling: Inception Report

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Interim Results and Work Plan
USAID GKG Trans-boundary Natural Resources Management Initiative

The following provides interim information on the Community Socioeconomic Profiling assignment, under the USAID GKG Trans-boundary Natural Resources Management Initiative. The structure of the report will follow the "Specific tasks" as indicated in the Scope of Work.

The first two tasks include assessing the scope, scale and availability of secondary data and include

1. ***Assess the scope and scale of population densities in the areas defined above, based on available secondary data. Please find attached interim results.***

2. ***Assess the availability of secondary data to determine its breadth, depth and quality for use in achieving the objectives of this study***

ASSESSMENT OF SCOPE AND SCALE OF POPULATION DENSITIES
In South Africa, it was agreed to look at the area between the Sabie River in the south and the Lethaba River in the north. Two discrete areas were identified for potential work by the project: the former homeland areas between the Sabie River and the commercial farms that adjoin Kruger Park and the area north of the commercial farms (from the Oliphants River) and south of the Lethaba River.

The former Tsonga homeland area now has about 3 million inhabitants, most of whom were moved to this land from other sites either inside Kruger, from the south or from the north. This region is characterised by relatively dense population areas within a much larger region, clustered around urban sites running from Hazyview in the south up to Acornshoek in the north. There are many smaller settlements along the edge of the park that can be considered either purely rural or service center focused.

Within the scope of the information retrieved and analyzed thus far, the primary gap on the Western Kruger side is information on the livelihood strategies of those households located in the rural/urban strata[1], specifically looking at agricultural activities, natural resource-based activities and non natural resource-based activities. The assumption is that households in the rural/urban center do not engage as extensively in agricultural and NRM/non-NRM based activities as compared to their rural counterparts. The problem is verifying this assumption, and thus the primary objective of the scheduled field survey is to investigate the livelihood strategies and agricultural/NRM/non-NRM activities of the rural/urban strata. This will be undertaken utilizing a comparative survey instrument that seeks to measure the proportionality of these activities between the strata.

On the Gaza side, The NRM and Agricultural Specialist, Dr. Gacheke Simons, has been in contact with the USAID-funded FEWS (Food Early Warning System) project in Mozambique, and has obtained a summary copy of a report focussing on the north of the Massingir Dam. On the basis of the summary, we anticipate that the data set (which we are in the process of obtaining) will yield very valuable and detailed data including on basic minimum food consumption, mapping out livelihoods, and demographic, natural resource and agricultural activities. The FEWS team is currently in the field working on the southern area of Massingir Dam. Dr. Simons has also sought out a study conducted by the Mozambican

[1] As categorised for the impending field survey.

Ministry of Agriculture that provides socio-economic and agricultural and forestry data on the Mahel region. The report is in Portuguese and we are currently looking into a translation. At this stage, we see information gaps in the health and non-natural resource-based activities.

The specific details on the Coutada 16 and on the strip around the Gonarazhou Park are still being researched.

ASSESSMENT OF RESOURCES

Gaza (Mozambique)

1. IUCN Report

The IUCN Report:

- Outlines the Administrative, geographical and physical context of Coutada 16
- Assesses a) awareness levels of communities within Coutada 16 on the GKG-TFP agreement, b) the process of community consultation and information dissemination and c) communities' perceptions on the GKG-TPF.
- Provide baseline socio-economic information on:
    - Social services (education, health, water provision)
- Demographic information
    - Population density (5 to 10 people in the South and 0 to 7 people in the North)
    - Education levels (68% with no formal education, and high drop out rates after 15 years of age for both boys and girls)
    - Housing (92% constructed from poles and grass)
- Means of survival
    - Agriculture (bases for subsistence, maize and pumpkins as the main crops, mutual support and animal traction as main production strategies and home consumption with significant marketing at places as the main features consumption)
    - Animal production (an average of 57% of homesteads with an average of 6 head of cattle, used mainly as means of production and savings).
    - Remittances from family members working away from home.
- Natural resource use
    - Energy sources (firewood as main energy source for cooking, light and heat, followed by paraffin).

The report concludes with a set of recommendations.

Although the report provides useful background information, the analysis is shallow/superficial, it states the obvious and does not provide an understanding of the socio-economic dynamics of the area. This will require further research into the area.

The USAID funded Famine Early Warning Systems (FEWS) project is busy preparing a socioeconomic atlas on the Limpopo basin in Mozambique. Dr. Simons has visited them and they are providing us with data from their survey work that will be of relevance to the project.

2. Peace Parks survey

Peace Parks is currently carrying out a survey in the Coutada 16. However, the report is not yet available. Rumors have it that their survey leader, while a good field worker, is not an

experienced survey manager and data analyst, so the results of the survey may not fully exploit the data collected.

Western Kruger (South Africa)

The area that has been identified for the acquisition of good community-based socio-economic data (secondary and primary sources) is the region between the Sabie River moving north towards the southern border of the private game reserves territory. A site assessment of the area north of the private game reserves, namely between its northern border and the Letaba river has shown that because of its primarily commercial usage, it would not be valuable for socio-economic profiling.

The University of Witwatersrand (Wits) has a research center at the northern end of the former Tsonga homeland inside a private park. This center has carried out extensive research in the area over the past decade and serves as an excellent resource to tap into. Some of the projects being run out of the Wits research facility have documents described below.

1. **Future Water Services and Socio-Economic Survey in Bushbuckridge (Rand Water)**

The report provides demographic and socio economic information of dense peri-urban, traditional and informal settlements of Marite, Dwarsloop and Acornhoek in the central to northwestern regions of the study area. The report is based on an extensive survey of 13170 households. The analysis though is highly aggregated and generalized and includes:

- A "Respondent Profile" in terms of gender, age, occupation, and level of education.
- A "Household Profile" in terms of household size, migration patterns, length of stay and dwelling structure.
- Household income and expenditure patterns in terms of income resources, monthly household income and monthly household expenditure patterns.

Since the information is aggregated and generalized it provides only a very broad view of socio-economic circumstances of peri-urban livelihoods in the study area.

If the captured data (the database) could be available, more correlations, interpretations and analysis would be possible to provide a better understanding of "the city in the country".

2. **Save the Sand (AWARD)**

In the Save the Sand study the following are discussed:

- The biophysical characteristics of the Sand River catchment. Different land use scenarios for the area (per identified zones) are suggested and the study concludes:
    - That cropping potential in the East (towards the conservation areas) is low due to climate, low rainfall and sandy soils.
    - That in identified "irrigation zones" (defined in terms of good irrigable soils in proximity to irrigation resources), the area currently under irrigation can be increased to close to 6000 ha.
- Current development and irrigation projects in the area.
- Infrastructure in terms of water supply, sanitation, electrification etc. Current infrastructure and service provision are assessed and future scenarios are discussed.

- The historical and administrative context and the socio-economic situation. The socio-economic profile though is based on published material and limited to the northwestern region of the study area.

The value of the Save the Sand study for the project lies:

- In the information on land use and the identification of possible land use scenarios and development opportunities in the Sand River catchment.
- In the understanding of the economic and development potential it provides.

3. SUNRAE PROJECT

The SUNRAE studies deal with:

- Landscape changes,
- The utilization of the natural resource base,
- The commercial value of woodland resources and consumption and income generation from natural products.
- The potential of the harvesting of the vast quantities of secondary products on conservation land to stimulate local rural economies

Although the quality of these studies differs, Charlie Shackelton's studies would provide the baseline for the consideration of natural resource-based economic activities in the study area.

4. AGINCOURT PROGRAMME

The Agincourt Health and Population Programme (AHPP) of the Health Systems Development Unit (HSDU) generated a large body of inter-disciplinary research. The Agincourt site includes 20 settlements in the southeastern region of the study area.

Based on the Demographic and Health Surveillance System (initiated in 1992 with a fifth census update in 1999) a range of demographic and health studies are being undertaken. Publications are largely health related and include studies on:

- Mortality and the causes of death.
- Community driven primary health care.
- Health information systems.
- Fertility etc.

Although these studies draw from the demographic database, it appears that little has been published on socio-economic issues. A "basic demographic understanding" for health planning and practice analyses the results of baseline socio-economic data for the period 1992 – 1995 and includes the following key demographic variables:

- Population size and density
- Age and gender profile
- Household composition
- Migrant labour
- Educational level
- Refugees

The only socio-economic studies listed, amongst an abundance of health studies, as "Current Research Activities" are studies on:

- Adaptive strategies of rural South African households
- Old age, welfare policy and poverty
- Pensions and household economy

The value of the Agincourt programme is:

- The geographical area it covers. It is the only study that covers the southeastern regions of the study area.
- The work on health of which there is a wealth of published material available
- The demographic information that would have to be provided as the published material on population is limited and generalized.

To date, we have collected mostly health and morbidity-related information via selected Agincourt papers. This information is currently being analysed by our Health Specialist. We have also submitted an official request to the Agincourt project to obtain more specific data on demographic, education and other socio-economic information including time-series statistics.

5. Seville

The study analysed socio-economic circumstances and livelihood strategies in a single village in the northeastern corner of the study area. Initiated in 1984, the last household survey was done in 1996. The information is qualitative but since it was only one village that was studied the "sample" included the whole village.

The study represented livelihoods in "rural" villages and as critical livelihood issues of the rural poor has changed little between 1984 and 1996, changes since than would also not be too fundamental.

Geographical Coverage

The studies cover more or less the whole "communal" area between the Olifants and Sabie Rivers:

- The Rand Water study covers the eastern area with Acornhoek in the North, Dwarsloop more or less in the center and Marite more towards the South
- The Save the Sand study covers the northern and central regions
- The Agincourt programme covers settlements in the southwestern region of the study area
- Seville is in the northeastern region of the study area.

Key Socio-economic Issues

The studies and the databases on which the studies are based would if we could get access to the basic data, cover all key demographic issues. It appears though that the available data would not be sufficient to gain an understanding of survival strategies in different socio-economic circumstances.

Gonarezhou (Zimbabwe)

While the Micro-enterprise specialist and team leader was in Harare, Zimbabwe on business for ECI during the last week of January, he managed to hold informal meetings with possible sources of information pertaining to the communities bordering the Gonarazhou Park. The majority of information that we have collected thus far has mostly been related to NRM resource use, consumptive and non-consumptive tourism opportunities, and land, labour and expenditure profiles for selected areas. The primary gap in information relates to acquiring more detailed demographic and health-related statistics for the subject communities, as well as more quantitative information on NRM and agricultural activities. The major problem in information gathering has been the inability to travel to Zimbabwe due to

Despite the restrictions on travel to Zimbabwe during the months of February and March, we have been successful in identifying good sources of potential information. This includes the University of Zimbabwe's Centre for Applied Social Science, via our Health expert Dr. David Wilson, and various humanitarian and NGO organisations that follow below.

World Wildlife Fund: Provided us with some useful references that will be outlined below:

- A case study in a book called African Wildlife and Livelihoods, involving the Mahenya Ward, lying at the extreme southern end of the Chipinge District**,** and bordering the Gonarazhou National Park on the Save River. The case study illustrated a relatively successful experiment where in the case of the Mahenye community, a relatively cohesive community was able to work with the government, Gonarazhou Park officials and the private sector in non-consumptive tourism revenue generation.
- For the Beitbridge District Council, the WWF produced a resource base assessment and market survey for the Maramani Craft Development Project. The assessment focussed on the sustainable use of natural resources to provide livelihoods for the local community. In this interesting study, the objective was to apply a resource base assessment methodology to exploit the development of a craft industry while considering the requirements and the sustainability thereof of natural resource inputs. Interestingly crafts were through field research as being by far the most prominent means of generating income.
- The WWF also carried out a study on the financial and market viability of the Mutandahwe Campsite, Chipinge Rural District Council. The study first gives a brief outline of how developed infrastructurally developed the campsite is and shows that the majority of the work is done by the local community. The primary focus of the study is centered on the financial costs and benefits of commercial development, including various scenarios looking at different cost and income combinations in order to test flexibility of viability.
- Finally, in 1998 the WWF commissioned a feasibility study for the Chiredzi Rural District Council that looked at possible tourism development in Sengwe Communal Land, which is located in close proximity to the Gonarazhou National Park. Major findings revealed the macro-economic conditions in Zimbabwe combined with the current low level of tourist demand in the southeastern Lowveld rendered the tourism projects investigated, non-viable in the short-term. Despite this though, it was suggested that the scope for improving returns from sport hunting and indeed the diversification into non-consumptive activities that attract greater spending power of international tourists, could improve with the development of the greater Limpopo transfrontier conservation area. The Study provides not only a detailed look at the feasibility of tourism options in the area, but also provides descriptive information on the socio-economy, natural resource base, and physical description of the area.

- **Zimbabwe Trust** (Information provided to us was not relevant in the context of the project.

- **Safire** has provided us with extensive background information on Chiredzi District. The report provides a good but mostly qualitative cross-sectional overview of the District including on: Land Use systems, irrigation schemes, Livestock production and natural resources Labour availability, input/output markets, commodity, financial and cross-border markets, Main sources of income and expenditure, and availability of and access to capital. Interestingly, the use of natural resources is said to be widespread in the District, with villages in communal areas featuring crafts and carpentry as sources of income for most households during dry growing seasons and drought years. Moreover, conventional dryland agriculture was identified as a virtual non-event save for livestock and irrigation farming.

- **Cesvi:** ECI visited the Cesvi Office in Harare. Cesvi is an Italian-based humanitarian assistance organisation operating in over thirty countries around the world including an office in Zimbabwe. The organisation has available socio-economic data relevant to our research needs and is in the process of obtaining approval of the report prior to delivery to ECI.

Additional contacts include Save the Children (Harare) who have completed national Food Economy Assessments and World Vision's Participatory Rural Appraisal reports that will both pertain to the regions under investigation. We have established contact with both of these organisations and are awaiting receipt of relevant reports/materials. The FEWS project in Zimbabwe also collects relevant information on the project area and is sending us their statistics.

3. Determine the most appropriate sample size, time frame, and personnel resources needed to gather primary data as required to supplement secondary data.

The Survey Manager and Natural Resource Management/Agriculture Specialist were in the Bushbuckridge District finalizing the survey design including identifying the sampling frame, sample size and a household questionnaire during the first half of the week starting 11 February 2002.

<u>The Sampling Frame and sample size</u>:

This was based on a two-stage procedure as follows:

The design is based on the Stratified Random Sample approach and the sample identified using a Two-Stage Proportion to Size sampling technique. This reduces the need for a large sample while allowing the enumeration of a representative sample of the entire area and to as much as possible capturing variability and differentiation in resource use, proximity, economic activities and livelihood patterns using a reasonably small sample. The resulting sampling-frame is 15 enumeration villages with each village containing approximately 3% of the households. This amounts to a total of 340 households (see summary table including stratification and sampling procedures below).

A list of all households and standard random procedures for picking out names can be used to ensure a purely random sample. Such lists do not however exist and cannot be developed within the scope of this survey. The survey will employ accepted and commonly used

alternative approaches such as picking every "N^{th}" household along a given path or grid depending on the size and layout of the village. This procedure will be employed with the ultimate care and guidance so as not to loose randomness or bias the sample –that would reduce validity in applying survey results to the entire targeted population.

Stage one: Once the strata were identified 5 clusters (villages) were purposefully selected using existing local knowledge for their representation of the characteristics of the stratum. Stratum 1 and 2 have slightly higher representation to cater for the higher differentiation in livelihood activities. Stratum 1 and 2 survey areas are clusters of many villages together and the ones to be surveyed need to be identified aiming at capturing as much as possible the variability represented in the entire center and stratum.

Stage two: Based on existing population data and a 3% sample in each village the number of households to be sampled was determined according to its proportionate size such that the smallest village had the smallest number of sampled households. The result is 340 households in the sample. Maintaining the sample size for each strata, minor adjustments are made for logistical reasons for example keeping sample sizes in the nearest multiple of 4 because that is the size of the enumeration team.

The study area is divided into 3 strata each representing clearly distinct economic opportunities and activities, livelihood style and proximity and linkage to the protected areas. The optimal stratification should provide at maximum differentiation between the strata and minimum variability within a given stratum. The 3 strata identified for the survey (see table 1) have the following characteristics.

Strata 1: Rural-Urban Centers

Densely populated rural-urban centers or small towns relatively highly integrated in the cash economy and furthest from the protected areas. Here one can find vibrant business climate including supermarkets, banks, bakeries and many street hawkers. The population has almost no subsistence farming activities and is primarily living off non-resource based incomes including business, wage employment and pension incomes. It attracts younger families from the other 2 strata while supplying consumption goods to the interior. The family sizes are smaller; the average house size smaller and the population with formal education higher. In general these centers represent a more differentiated livelihood base, this alone meaning a correspondingly higher number of sample households to capture the diversities.

Stratum 2: Rural Service Centers

These are areas that are basically rural but offering communication services, linkage to the outside and groceries to the interior. They mark the end of transport routes from outside, would have a post office and small shops supplying groceries to nearby households but also the more interior stratum 3. Thus, no major employment opportunities here however provides the main linkages to the outside opportunities including strata 1. Falling between stratum 1 and 3, they have some crop and livestock production and fairly dense settlement patterns.

Stratum 3: Rural

This comprises remote villages closest to protected areas, their economy relatively more dependent on subsistence crop production, have relatively more heads of cattle, more dependent on local employment opportunities including the nearby parks and commercial farms. They have larger families, lower education, higher illiteracy levels and large homes. Their livelihood base is the least differentiated and population density in any area is relatively low – consequently requiring the sampling of fewer households to capture variability.

Table 1: SAMPLING FRAME AND SAMPLE SIZE

STRATA	**Geographical Coverage**	**Name of Village**	**Approx Population/village (1996 census)**	**Ave. Household size**	**Appr. No. Hholds /per village**	**No. of villages per stratum**	**Sample size per village**	**Total sample per stratum**
1.Rural-Urban Centers	North Middle South	Acornhoek cluster (vialges 1, 2, 3) - Mkulu (village 1,&2)	Average 6,000	5	Ave. 1,200	5	36	180
2.Rural Service Centers	North Middle South	Hluvukani cluster (villages 1 &2) Agincourt cluster Village 1 Ximungwe cluster Village 1&2	Average 4,000	6	Ave. 666	5	20	100
3.Rural	North Middle South	Seville Gottenburg (Hlalakhahle) Dumpfries Justicia Lillydale	333 1200 900 2100 3400	7	66 240 180 420 680	5	4 12 8 16 20	60
TOTAL								**340**

The Household Questionnaire:

Content:

The questionnaire is designed to complete gaps in the existing information as well as to verify some of the older data. It is focused on the livelihoods of the target population, its core support system, their dependence and to an extent the likely effect of that on the natural resource base, major constraints and threats (including poor community health and HIV/AIDS) to sustaining and improving these livelihoods. It will provide information that is valuable in identifying opportunities for the improvement of both the livelihoods and the resource base under the GKG initiative and serve as baseline against which to track future changes in both the livelihoods and resource base.

Results application
The results should provide:

1) Provide a good understanding of the current demographic parameters and livelihoods of targeted population, their key economic and survival strategies, the significance of this on the sustainability of the resource base in this,
2) Help predict the livelihood outcome from future changes in policy and degradation or improvement of the resource base.
3) Help identify possible ways to simultaneously improve the targeted population livelihoods and the resource base, not as far as for example identifying potentially successful community resource-based enterprises, but a good base to start examining possibilities, and
4) Baseline against which changes in resource access by households and the impact of any future investment interventions or policies on their livelihoods can be measured. By the survey being based on a scientific design, it can in future be built into a cost effective M and E system, including setting controls to help identify impact of specific interventions in specific areas.

Questionnaire design will be led by the Survey Manager with specific inputs received from the NRM and Health Specialists respectively.

The anticipated resources required to carry out the survey will include ten (10) fieldworkers (two supervisors and eight enumerators), the Survey Manager and Natural Resource Management specialist, and the Health Specialist.

4. Assemble a small team of sectoral experts to address all six of the subject areas listed above.

ECI has assembled a team of specialists in survey economics and micro and small enterprise development, survey management and sociology, natural resource management and agriculture, health analysis including HIV/AIDS, and research and data support.

The team is composed of:

1. Mr. William Grant, Director-in-Charge (Economist and MSE Specialist).
2. Dr. Adriaan Fischer (Survey Manager and Sociologist)
3. Dr. Gacheke Simons (Natural Resource Management and Agriculture Specialist)
4. Dr. David Wilson (Health Analyst)
5. Mr. Vinothan Naidoo (Research and Data analyst)

6. Proposed for the Bushbuckridge survey: two (2) survey Supervisors and eight (8) enumerators to be hired by DAI.

5. Submit a detailed work outline to the DAI COP and/or USAID Cognizant Technical Officer (CTO), identifying resource requirements, responsibilities of team members, primary data collection required, and other aspects of conducting the survey.

To prepare for the survey in the identified area on the western boundary of KNP, Dr. Fischer and Dr. Simons visited the area in January to develop a workplan and approach. Following the initial orientation to the area, a workshop with Dr. Fischer, Dr. Simons and the fieldworkers was organized at Wits Rural Facility for February the 11th and 12th. The workshop had a threefold purpose:

- It provided an opportunity to meet, screen and select a team of fieldworkers;
- It provided an opportunity to introduce the fieldworkers to the study, and create an understanding of the purpose of the study in advance of the actual commencement of fieldwork;
- Most important however, the fieldworkers could be used as a collective resource in designing the survey and in developing the survey instrument, to ensure that it relates to and reflect the socio economic realities of the area.

To embark on such a research venture the necessary protocol needs to be followed, and on the 13th the supervisors planned to meet the Traditional Authorities (TA) of Mnisi, Mafemane and Jongilanga. Upon a request from one of the "tribal" secretaries while trying to arrange meetings with the different TAs for more information on the proposed transfrontier park, Dr. Fischer returned to meet the TAs to arrange fieldwork access to the area. At Jongilanga the TA requested a further meeting on Tuesday the 19th February to introduce the research to their chief who was not present on Friday.

As this would conclude the protocol to get fieldwork access to the area, fieldworker training on the final questionnaire is planned to start on the 20th February at Wits Rural Facility. The questionnaire will be piloted on the 21st followed by 10 days of fieldwork.

Next Steps
While the fieldwork is progressing in South Africa, Mr. Grant, Dr Fisher and Dr. Simons will carry out further research on the specific steps required to get appropriate data from the area south of Coutada 16. Ideally this fieldwork will be carried out in early March, weather permitting.